Kodak

IDEAlliance®

Off-Press Proof Application Data Sheet

Kodak Matchprint Virtual Proofing System with Eizo CG211 Display for SWOP Coated #3

The IDEAlliance Print Properties Working Group has established a certification process for off-press proofs as input material to publications. In accordance with this process: "The appearance of a hard copy or monitor proof used in this application must have the ability to closely match specific CGATS or other documented characterization data sets within outlined tolerances." See further explanations and recommendations outlined on www.swop.org or www.gracol.org.

The following information is intended to assist producers and consumers in the use of vendor specified proofing materials in an off-press proof application:

I. Manufacturer

Eastman Kodak Company
343 State Street
Rochester, NY 14650 U.S.A.

II. Product

Kodak Matchprint Virtual Proofing System with Eizo CG211 Display

III. Introduction

Kodak Matchprint Virtual Proofing System provides for color-accurate viewing of CMYK files on suitable Liquid Crystal Display (LCD) electronic monitors. Users may select custom or standard color rendition targets, including a standard / supplied SWOP Coated #3 color profile, which is freely available to all users. Visual match to corresponding SWOP Coated #3 hard copy reference proofs is achieved and can be confirmed by selecting this profile when viewing a digital file on the monitor screen and simultaneously viewing the reference hard copy proof under controlled lighting conditions. A Matchprint Virtual Monitor Calibrator instrument (specially manufactured and calibrated colorimeter) and software tool to automatically confirm and report compliance with SWOP Coated #3 color standards are supplied as standard components in Matchprint Virtual Version 5.1 and later.

IV. Control Guide

IDEAlliance specifies a control guide such as an ISO 12647-7 Digital Control Strip 2007 be supplied on every off-press proof. As a minimum, the guide used for proofing applications should contain solids for the primary process colors (YMCK), two-color overprints (RGB) and a three-color overprint (YMC), as well as 25%, 50%, and 75% tints in stated line screen resolution of each of the primary process colors and 3-color gray patches. All control guides should be checked for accuracy of the original values. Use and interpretation of a control guide is the responsibility of the creator.

Kodak

V. System Components

Hardware:

1. Eizo Nanao Technologies ColorEdge CG211 LCD Display, with cables.
2. **Kodak Matchprint** Virtual Monitor Calibrator, a specially manufactured and calibrated colorimeter supplied by **Kodak** for use with the **Matchprint** Virtual Proofing System.
3. Apple Macintosh G5 (with the correct video card) and Mac Pro that supports the Eizo ColorEdge CG211 LCD Display with keyboard and mouse.

Software:

1. Apple Macintosh OS/X Version 10.4.6, or greater Operating System software.
2. **Matchprint** Virtual Calibration Software, Version 5.1 or greater.
3. InSite Prepress Portal (Jobs) (v 5.0.5 or later), InSite Creative Workflow (Projects) (v 3.1.2 or later) or Kodak PressProof (Surfaces) (v 5.0.5 or later).

Environment and Viewing:

Subdued ambient light is recommended for optimum color viewing. While certain LCD displays are suitable for viewing and judging color proofs, viewing angle for critical color judgment is more restrictive. **Kodak** recommends viewing the LCD display from a position directly in front and perpendicular to the center of the LCD screen.

When viewing reference hard copy proofs, **Kodak** recommends a GTI SOFV-1ex viewing booth with **Kodak** approved lot number lamps (5,000 K).

Setup and Protocol:

Follow these steps to ensure **Matchprint** Virtual Proofing System viewing is in conformance with SWOP Coated #3 requirements:

1. Switch on all system components and allow one hour warm-up. **Kodak Matchprint** Virtual automatically enforces this one-hour warm-up from a cold start. (For Matchprint Virtual installation see the Matchprint Virtual Quick Reference Card). (http://graphics1.kodak.com/us/product/workflow_data_storage/printing_solutions/synapse/matchprint_virtual_option/default.htm).

2. After warm-up, launch **Matchprint** Virtual Calibrator software and follow the on-screen prompts to complete the automatic calibration process.

3. Select the Kodak-supplied color target “SWOP C3” when viewing **Matchprint** Virtual proofs on-screen. The following steps confirm how to select color targets with Kodak Matchprint Virtual Systems.

   Note: Kodak soft proofing systems define preset settings called “targets” which define proofing preferences. These preferences include such information as the ICC profile to be used, as well as how to handle embedded RGB images, how to process spot colors, etc. Your system should already be configured with a target called “SWOP C3”. If not, contact the Kodak Response Center to obtain the latest system update software for your InSite product.

For more information please see the Matchprint Virtual 5.x System Administration Guide. (https://ecentral.kodak.com/eCentral/Self_support/product_support_resultsn.asp?ProductName=Matchprint%20Virtual&countryid=global).

4. For InSite Prepress Portal, select the desired Customer and Job where the file you want to view with SWOP C3 target.
    a. Select the file, select Set Color Target, select the SWOP C3 target and click Save.
    b. Click on the thumbnail to launch Smart Review, select Full Screen Preview to view the file at actual size (100%).

    For more information please refer to the Matchprint Virtual 5.1 for InSite Prepress Portal and PressProof Staff Quick Start Guide. (http://graphics1.kodak.com/us/product/workflow_data_storage/printing_solutions/synapse/matchprint_virtual_option/default.htm).

5. For InSite Creative Workflow, select the desired Customer and Project where the file you want to view with SWOP C3 target.
    a. Select the element, Create a new Color Approval Task, select the SWOP C3 target, select yourself under users, click Create Task.
    b. Click on the thumbnail to launch Smart Review.
    c. Select the Color Task you created, select Full Screen Preview to view the file at actual size (100%).

    For more information please refer to the Matchprint Virtual 5.1 for InSite Creative Workflow Quick Start Guide. (http://graphics1.kodak.com/us/product/workflow_data_storage/printing_solutions/synapse/matchprint_virtual_option/default.htm).

6. For Kodak PressProof, determine the location of the TIFF you want to view.
    a. Create a colortarget.txt file with reference to the SWOP C3 target and place the .txt file in the same folder as the TIFF file.
    b. Launch PressProof client, log in, search for the TIFF and click open.
    c. Select the TIFF from the left panel, file will display at actual size (100%)

    For more information please refer to the Matchprint Virtual 5.1 for InSite Prepress Portal and PressProof Staff Quick Start Guide. (http://graphics1.kodak.com/us/product/workflow_data_storage/printing_solutions/synapse/matchprint_virtual_option/default.htm).

7. A convenient means to insure and confirm compliance with SWOP Coated #3 requirements:

    a. Launch the MVP Color Check application from either the **Matchprint** Virtual folder in the Dock area or in Macintosh HD | Applications | **Matchprint** Virtual | **Matchprint** Virtual.

    b. When the MV Calibrator dialog box appears, confirm the **Kodak** Monitor Calibrator is placed flat on an opaque surface and click OK. When the colorimeter dark calibration is

complete (approximately 10 seconds), click on the LCD display screen to select it for SWOP Coated #3 color confirmation.

c. Position the **Kodak** Monitor Calibrator flat against the display within the on-screen outline and press any key.

d. In the Measurement dialog box, click Color Check. If C3_AutoSWOPADS.EizoCG211 has not been previously selected, click Choose, select C3_AutoSWOPADS.EizoCG211 and click Open.

e. Once C3_AutoSWOPADS.EizoCG211 has been selected, click Continue in the Color Check dialog box. Re-confirm placement of the **Kodak** Monitor Calibrator and press any key.

f. A series of color patches (noted in Appendix 2) automatically appears successively on-screen.

g. When automatic color measurement is complete, a data table is presented on screen. Within this table are actual color measurement values and Delta E comparisons for each color with values in Appendix 2 of this ADS. To print this table, navigate to the Dock | **Matchprint** Virtual Folder | Log Files | AutoLabCheckLogs and select the corresponding file from the list. Macintosh TextEdit application will open the file, which can be printed from File | Print.

VI. Finishing Procedures

None required.

VII. Finished Proof Characteristics

A **Matchprint** Virtual Proof with color characteristics referenced in Appendix 1 is to be expected when an on-screen ADS Proofing Certification Strip is measured using an X-Rite Eye One Pro spectrophotometer with the **Kodak**-supplied SWOP Coated #3 color profile applied.

Note: Three-color grays are comprised of Cyan, Magenta, Yellow: 75, 66, 66; 50, 40, 40; and 25, 19, 19 values.

As a preferred alternative, **Kodak** recommends the supplied **Matchprint** Virtual Monitor Calibrator for either manual or automatic verification of color compliance to SWOP Coated #3 standards. With this instrument, color values and tolerances noted in Appendix 2 apply.

VIII. Sample Proofs

Kodak has made this Application Data Sheet and the corresponding Matchprint Virtual system available to the IDEAlliance certifying contractor to perform independent, corroborating measurements in the course of SWOP Coated #3 certification.

Kodak

Appendix 1
Characterization Data CIELab Values

IDEAlliance ISO 12647-7 Digital Control Strip 2007 for SWOP 2006 Coated #3

Patch ID	CIELab Data			Maximum
	L*	a*	b*	ΔE-2000
A1	31.96	-21.01	-26.32	-
A2	56.99	-37.23	-44.95	7
A3	66.07	-27.13	-33.53	-
A4	80.52	-11.80	-15.33	-
A5	25.80	40.75	-2.90	-
A6	47.84	72.08	-3.11	7
A7	58.95	51.61	-4.46	-
A8	78.03	20.64	-3.18	-
A9	47.67	-4.29	45.76	-
A10	87.97	-5.03	88.10	7
A11	89.28	-5.09	62.78	-
A12	91.24	-2.93	25.28	-
A13	54.86	-51.51	-16.56	-
A14	38.04	51.19	-21.63	-
A15	69.74	23.44	67.23	-
A16	49.55	15.84	31.56	-
A17	40.89	33.29	12.00	-
A18	34.01	22.69	-16.52	-
A19	52.24	-17.96	25.88	-
A20	36.91	-2.13	-25.08	-
A21	90.46	-0.06	-0.21	-
A22	85.69	-0.18	-0.70	-
A23	75.49	-0.39	-1.61	-
A24	58.21	-0.51	-2.27	-
A25	39.28	-0.34	-1.80	-
A26	26.88	-0.14	-0.89	-
A27	18.06	0.01	-0.11	7

Patch ID	CIELab Data			Maximum
	L*	a*	b*	ΔE -2000
B1	15.57	11.13	-25.12	-
B2	26.85	18.10	-44.32	7
B3	40.85	16.19	-34.08	-
B4	67.49	7.60	-17.17	-
B5	25.19	35.01	22.46	-
B6	46.86	66.21	45.03	7
B7	57.68	47.17	37.42	-
B8	77.94	18.06	18.43	-
B9	29.42	-36.88	12.46	-
B10	52.12	-64.75	24.83	7
B11	63.15	-41.26	21.06	-
B12	79.23	-15.72	8.94	-
B13	44.63	-16.62	-44.13	-
B14	47.87	69.02	16.49	-
B15	72.78	-24.61	60.84	-
B16	68.56	20.02	18.67	-
B17	52.11	36.50	27.30	-
B18	40.29	32.11	25.13	-
B19	45.95	-26.09	-3.01	-
B20	92.50	0.00	0.00	3
B21	90.08	-0.02	-0.08	-
B22	84.59	-0.04	-0.22	-
B23	73.54	-0.15	-0.48	-
B24	56.29	-0.48	-0.41	3
B25	39.80	-0.33	0.14	-
B26	24.79	0.22	-0.52	-
B27	8.91	-0.43	-0.21	-

Per IDEAlliance requirements, color measurements in Appendix 1 utilize a calibrated and warmed-up X-Rite Eye One Pro spectrophotometer for certification measurements. **Kodak** recommends averaging several color measurements for each patch and frequently re-confirming white and black calibrations while measuring colors on-screen.

Kodak

Appendix 2

CIELab Values from Matchprint Virtual Color Check Application using Kodak Matchprint Virtual Monitor Calibrator

SWOP 2006 Coated #3

Patch ID	CIELab Data			Maximum Delta E94
	L*	a*	b*	
Paper	92.51	0.11	-0.12	2.5
Yellow Solid	89.65	-8.02	84.19	2.5
Yellow 75%	89.10	-7.84	70.87	2.5
Yellow 50%	90.43	-6.29	45.14	2.5
Yellow 25%	91.45	-3.30	21.37	2.5
Magenta Solid	47.13	72.76	-4.87	2.5
Magenta 75%	56.80	54.99	-5.97	2.5
Magenta 50%	68.16	35.42	-5.09	2.5
Magenta 25%	80.33	17.46	-2.89	2.5
Cyan Solid	58.49	-23.83	-38.42	2.5
Cyan 75%	64.22	-24.67	-36.20	2.5
Cyan 50%	72.89	-16.51	-25.43	2.5
Cyan 25%	82.44	-8.81	-12.83	2.5
Black Solid	16.95	-0.45	0.14	2.5
Black 75%	38.98	-1.50	-1.58	2.5
Black 50%	58.01	-0.38	-2.73	2.5
Black 25%	75.17	-0.51	-1.47	2.5
Red Solid	46.42	64.83	43.17	2.5
Green Solid	53.52	-54.61	28.68	2.5
Blue Solid	26.13	23.21	-45.54	2.5
3 Color 100%	24.11	0.78	-0.21	2.5
3 Color 75%	40.15	-2.23	-0.50	2.5
3 Color 50%	56.18	-0.14	-0.30	2.5
3 Color 25%	74.36	-0.85	-1.61	2.5

Notes: 1) 3-color 25% and 75% CIELab values are calculations from the IT8/7.4 characterization data as these patches are not a subset of those data.

2) Color measurements in Appendix 2 utilize the supplied **Kodak Matchprint** Virtual Colorimeter and Color Check software application.

©Eastman Kodak Co. 2007. **Kodak** and **Matchprint** are trademarks of Eastman Kodak Co.
ADS MV211-C3-2007-11-26